

What is claimed is:

1. A fluid dispensing system, comprising:
a pump body constructed and arranged to couple to a container, the pump body
5 defining a fluid inlet opening and a pump cavity;
an inlet valve constructed and arranged to allow fluid from the container to enter
the pump cavity through the fluid inlet opening;
a plunger slidably received in the pump cavity, the plunger defining a fluid passage
through which the fluid is dispensed; and
10 a shipping seal sealing the fluid passage to minimize leakage of the fluid before
use.
2. The system of claim 1, further comprising an outlet valve disposed inside
the fluid passage to minimize fluid leakage between dispenses.
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3. The system of claim 2, wherein the outlet valve includes a check valve.
4. The system of claim 2, wherein the outlet valve includes a valve member
and a spring engaging the valve member to bias the valve member into a normally closed
20 position.
5. The system of claim 1, further comprising a shroud member covering the
inlet opening to draw fluid from the container.
- 25 6. The system of claim 1, further comprising a venting structure to equalize air
pressure inside the container.
7. The system of claim 6, wherein the venting structure includes a vent
opening defined in the pump body and a vent valve sealing the vent opening to allow air
30 passage into the container.

8. The system of claim 1, wherein the shipping seal is constructed and arranged to seal the fluid passage when the plunger is fully retracted and to allow fluid flow into the fluid passage when the plunger is extended.

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9. The system of claim 1, wherein the shipping seal includes:
a seal member constructed and arranged to seal inside the fluid passage in the plunger;
a support flange engaging the pump body; and
10 a flow opening defined in the support flange to allow passage of fluid into the fluid passage.

10. The system of claim 9, wherein the seal member extends from opposite sides of the support flange.

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11. The system of claim 9, wherein the seal member includes a beveled edge.

12. A fluid dispensing system, comprising:
a pump body constructed and arranged to couple to a container, the pump body
20 defining a fluid inlet opening inside the container and a pump cavity;
a plunger slidably received in the pump cavity to draw fluid from the container into the pump cavity; and
an intake shroud covering the inlet opening, the shroud including a flow channel to draw fluid from the container into the inlet opening.

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13. The system of claim 12, further comprising the container.

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14. The system of claim 13, wherein:
the container is inverted;
the shroud, the plunger and the inlet opening extend inside the container; and
the flow channel of the shroud opens at a position below the inlet opening in the
5 container.
15. The system of claim 12, further comprising a shipping seal disposed inside
the pump cavity to minimize fluid leakage during shipping.
- 10 16. The system of claim 12, further comprising a venting structure defined in
the pump body to equalize air pressure inside the container.
17. The system of claim 12, further comprising:
wherein the plunger defines a fluid passage that dispenses the fluid; and
15 an outlet valve disposed inside the fluid passage to minimize fluid leakage between
dispenses.
18. A fluid dispensing system, comprising:
a pump body defining a pump cavity;
20 a plunger slidably received in the pump cavity, the plunger defining a fluid passage
with a dispensing opening from which fluid is dispensed; and
an outlet valve disposed inside the fluid passage to minimize dripping of the fluid
from the dispensing opening.
- 25 19. The system of claim 18, further comprising a dispensing port coupled to
the plunger, the dispensing port defining a portion of the fluid passage and the dispensing
opening, wherein the outlet valve is disposed inside the fluid passage at an interface
between the plunger and the dispensing port.

20. The system of claim 19, wherein the outlet valve includes a spherical shaped valve member and a spring biasing the valve member in a normally closed position.

5 21. The system of claim 18, wherein the outlet valve includes a check valve.

22. The system of claim 18, further comprising:
wherein the pump body defines one or more fluid intake openings; and
an intake shroud is disposed over the pump body to draw fluid into the intake
10 openings.

23. The system of claim 22, further comprising an inlet valve disposed to seal the fluid intake openings.

15 24. The system of claim 18, further comprising a shipping seal constructed and arranged to seal the fluid passage to minimize fluid leakage during shipping.

25. The system of claim 18, further comprising a vent opening defined in the vent body and a vent seal to seal the vent opening.